AMENDMENTS TO THE SPECIFICATION:

Page 1, replace the paragraph, beginning on line 2, with the following amended paragraph:

This application is a continuation of prior copending U.S. application Serial No.: 09/831,950, now abandoned, filed on 16 May 2001 as the 35 USC 371 national stage of International Application PCT/NL99/00705 filed on 16 November 1999, which designated the United States of America.--

Page 7, beginning on line 22, insert the following heading, paragraph and heading:

--**Brief Description of the Drawings**

Figures 1 and 2 show alternative possible flow diagrams for the process of the invention.

Detailed Description of the Invention--

Page 7, line 23, delete the subject heading "**Engineering characteristics**".

Page 7, replace the paragraph, beginning on line 25, bridging pages 7, 8 and 9, with the following amended paragraph:

--Figure 1 shows a possible set-up for the process of the invention. Elemental sulphur (1) is preferably added in the form of ground particles which are either added directly to the reactor or preferably slurried up in the mixing tank (MT) using part of the reactor liquid (2) for this purpose prior to addition (3) to the bioreactor (R). In the anaerobic bioreactor an

electron donor (organic compound (6) or hydrogen/carbon monoxide (7)) is added and the elemental sulphur is reduced to produce hydrogen sulphide under ambient conditions. The bioreactor is well mixed in order to suspend the biomass and sulphur particles in the reactor and to create an effective contact between the two. Also the mixing prevents gradients of dissolved sulphide concentrations and pH through the reactor. Mixing can be achieved by different means, although it is preferred to mix the reactor using a gas recycle stream (4, and 5 ~~and 14~~). Preferably a gas-lift loop type of reactor is used in this case to optimize the mixing characteristics of the reactor. A gas recycle is preferred for mixing because it provides an easy way to control the pH in the reactor and remove the produced hydrogen sulphide from the reactor by means of contacting the recycle gas with a process stream (10) in which the hydrogen sulphide is required. Another possible flow scheme would be to lead part of the liquid effluent (12) of the anaerobic bioreactor to a separate sulphide stripping column (S) with recycle (13) and remove the sulphide from this stream by contacting it either with a process gas stream (14) containing process gases (22) or a gas recycle stream (4,5) over the contactor (C). This is shown in figure 2. A disadvantage of this flow scheme however is that the hydrogen sulphide is not removed from the liquid in the reactor itself. Applying a same pH in the bioreactor this will mean that the pH

in the stripper will rise due to the removal of hydrogen sulphide resulting in a higher gas recycle flow required over the contactor unit to transport the same amount of hydrogen sulphide.--